PHOTOGRAPHIC INTERPRETATION REPORT

KERCH/BAGEROVO AIRFIELD AND ASSOCIATED BOMBING RANGE USSR

[redacted]

DECEMBER 1967
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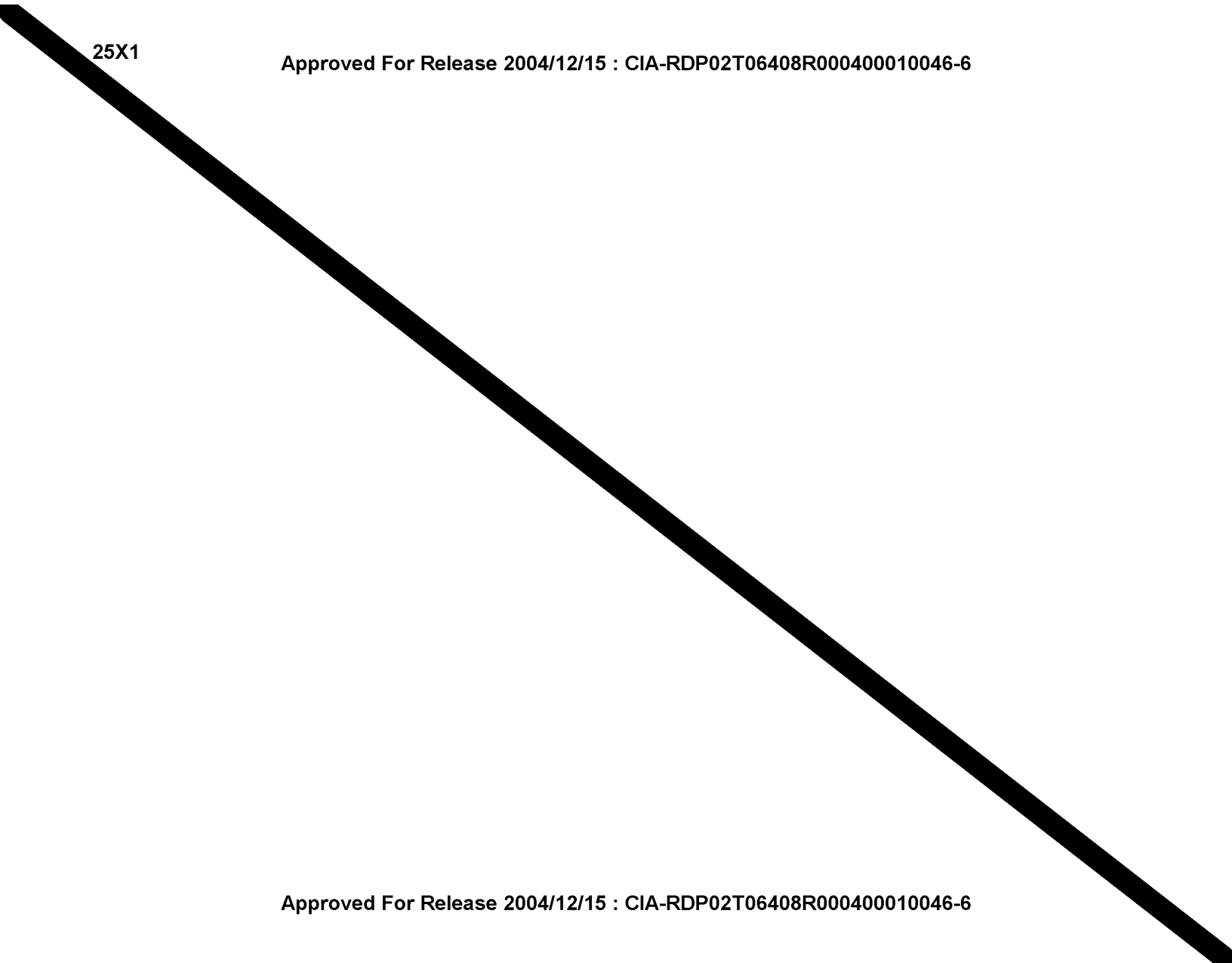

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PHOTOGRAPHIC INTERPRETATION REPORT

KERCH/BAGEROVO AIRFIELD AND ASSOCIATED BOMBING RANGE USSR

DECEMBER 1967

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

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SUMMARY

The Kerch/Bagerovo Airfield is on the east end of the Crimean Peninsula, 8 nautical miles (nm) west-northwest of Kerch. The associated Bombing Range is 4 nm northwest of the airfield, and the Explosives Storage Area is just east of the airfield.

25X1 Three of the 7 airdrop markers observed at the Bombing Range on [redacted] photography of [redacted] are still visible, 25X1 and one new marker was identified on the first clear [redacted] coverage of the range in [redacted] Where 25X1 possible the date of occurrence of various craters and areas of ground scarring around the markers has been given. Twelve areas of ground scarring could be identified as having 25X1 occurred between [redacted] indicating that the Soviets are retrieving test-dropped devices/weapons for further analysis. The craters are probably the result of 25X1 the explosion on impact of air-dropped devices/weapons. The 4 instrumentation sites located along the south side of the range probably are used for camera positions, electronics facilities, and other facilities necessary in gaining information on the ballistics of air-dropped mock-up weapons/ 25X1 devices.

A comparison of the airdrop markers at Kerch/Bagerovo Bombing Range with those at the Shot Ground portion of the [redacted] revealed 4 markers at the Shot Ground that are of the same configura- 25X1 tion and general size as Marker H at Kerch/Bagerovo. No triangular instrumentation array similar to the one identified 25X1 at Drop Zone 1 [redacted] could be identified at the Kerch/Bagerovo Bombing Range. Two Long-Range Air Force (LRAF) practice bombing ranges at Kherson and Dzhankoy were also used for comparison, but no significant similarities were found. Although 2 airdrop markers were seen at Dzhankoy, none could be identified at Kherson.

Because of the limited interpretability of the photography, no high frequency or very high frequency communications facilities or radars could be identified at the Kerch/Bagerovo Airfield or Bombing Range. The airfield has the normal GCA (Ground Control Approach) and ILS (Instrument Landing System).

INTRODUCTION

The Kerch/Bagerovo Airfield is 8 nm west-northwest of Kerch at coordinates 45-24N 036-15E. The associated Bombing Range is 4 nm northwest of the airfield and is bordered on the north by the Azovskoye More and on the south by the airfield. The Explosives Storage Area is just east of the airfield (Figure 1). The Kerch/Bagerovo Airfield and its associated Bombing Range have been described in two previous reports. The first was a very detailed report based on [redacted] 1/ 25X1
The second report used [redacted] photography through [redacted] and reported changes since the [redacted] coverage. 2/ Photography from [redacted] was used for the basic information in this report. 25X1

This report, while giving a general description of the Kerch/Bagerovo Airfield and the Explosives Storage Area, 25X1 25X1

Table 1. Chronology of Aircraft at Kerch/Bagerovo Airfield

Mission	Date	BISON	BULL	BEAR	BADGER	BLINDER	BEAGLE	Prob Transports	FITTER	CAT/CUB	CRATE	FAGOT/ FRESCO	MAX/ DRAKE	FLASHLIGHT/ FIREBAR	Medium	Small	Large	Light	Jet Fighters	Aircraft
		1	1	1	6			4											16	
															7	5				
																	3 SW			16+
																7 U/I	3 U/I			
															15+ SW					
					6*		6*			1*								14* ST			
					6	1									1			21 ST 2*			
					6	1										1 ST					
				1	6	1	6		2		3	1	6	9				1 ST			
				1+	3+	1+												3 ST		21+	
					6	1				1	3										
					3	1					2				1ST	9 SW 3 ST		5 ST			
					5	1					4*					15 SW		8 ST		1*	
					5	1	5		4	1	4	1	7	7							
					5	1	5		4	1	4	1	7	7							

* Probable
\+ Possible
SW Swept Wing
ST Straight wing
U/I Unidentified

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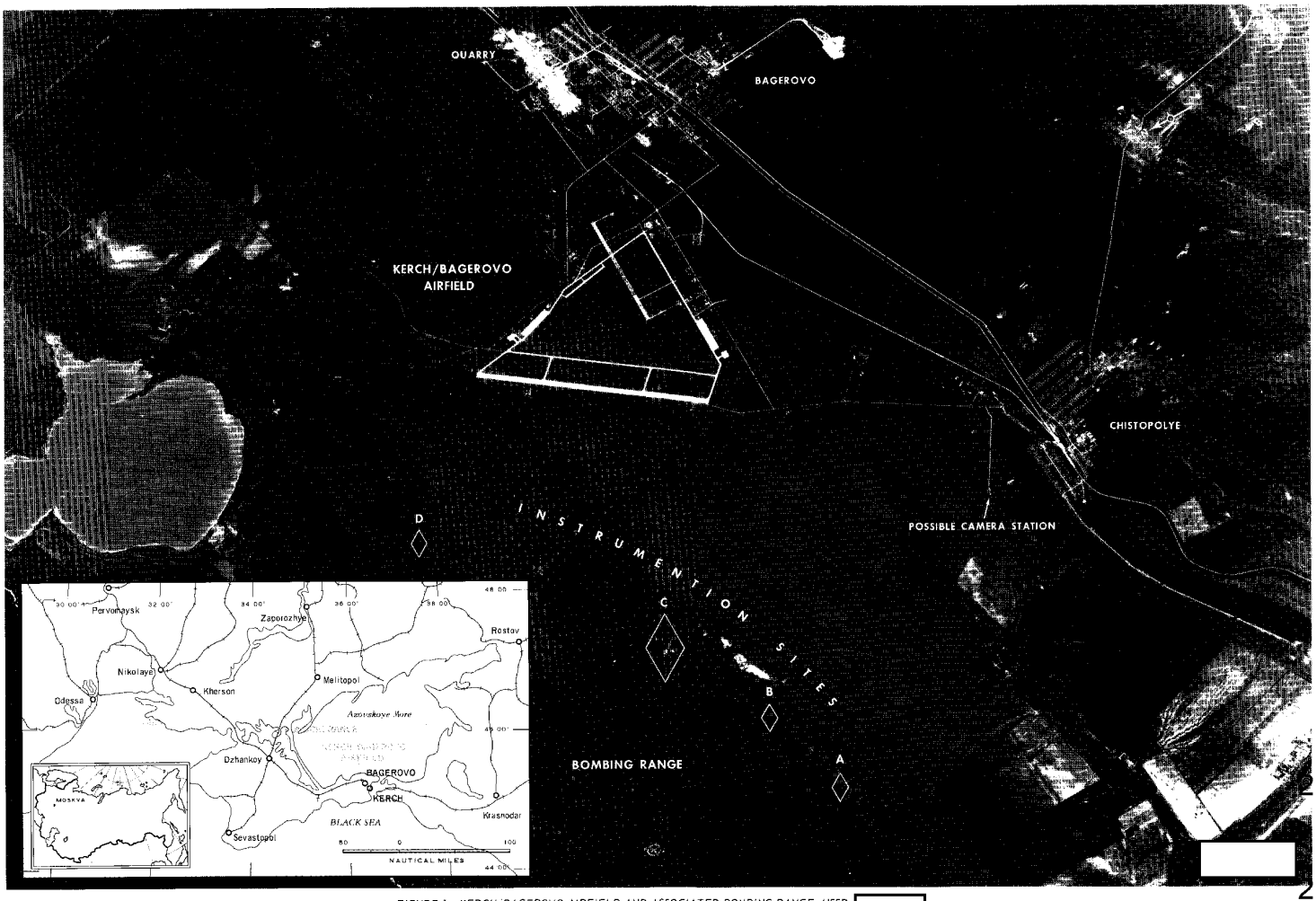

FIGURE 1. KERCH BAGEROVO AIRFIELD AND ASSOCIATED BOMBING RANGE, USSR, [redacted]

25X1
25X1

FIGURE 2. KERCH/BAGEROVO AIRFIELD AND EXPLOSIVES STORAGE AREA, [redacted] inset shows apron with loading pits.

will concentrate primarily on the Bombing Range in an attempt to relate the activities at the range with the Soviet [redacted] The airfield and Bombing Range appear to have many functions, including ballistics testing of mock-up nuclear devices in a bomb configuration, the testing and retrofit design of aircraft in a nuclear weapons delivery role, [redacted] Aircraft from the Kerch/Bagerovo Airfield have performed most of the airdrops [redacted]

KERCH/BAGEROVO AIRFIELD

The airfield is located 2.8 nautical miles northwest of Bagerovo, USSR (Figure 2). A chronological list of aircraft identified at the airfield is shown in Table 1. The airfield consists of a serviceable, concrete runway running northeast/southwest and measuring 13,605 by 275 feet; an old concrete runway running east-southeast/west-northwest and measuring 6,615 by 200 feet; and a graded earth runway running northeast/southwest and measuring 11,300 by 320 feet. A parallel taxiway with 2 end-connecting and 2 crossover link taxiways are southeast of the northeast/southwest concrete runway. A north/south taxiway and an east-southeast/west-northwest taxiway lead from the end-connecting

Table 2. Description of Items on Bombing Range
(Item numbers refer to Figure 6)

Item	Description	First Identified	Negated
1	Excavation [redacted] oriented NW/SE, located 5,170 ft NW of Marker H. Spoil has been pushed out both ends of excavation, probably to retrieve a test-dropped weapon/device.		
2	Eight aircraft silhouettes and a row of 4 small objects. No craters visible in immediate vicinity.		
3	Bomb crater [redacted] located 1,490 ft WSW of marker H. Bomb apparently exploded on impact.		
4	Excavation 90 x 15 ft, located 1,015 ft W of Marker H, probably dug to recover a test-dropped weapon/device. Excavation oriented generally E/W, apparently dug by bladed vehicle pushing spoil out E side.		
5	Bomb crater 10 ft diam, located adjacent to SW radar reflector 450 ft from center of Marker H. Light toning around crater indicates bomb exploded on impact.		
6	Bomb crater 10 ft diam, located adjacent to NE radar reflector 45 ft from center of Marker H. Bomb apparently exploded on impact.		
7	Graded area [redacted] oriented NE/SW, located 3,630 ft NNE of Marker H. A small object is at center of area. Possible result of recovery operation for shallow-buried, test-dropped weapon/device.		
8	Graded area 140 x 25 ft, oriented NE/SW, located 5,125 ft NE of Marker H. Possible recovery operation for shallow-buried, test-dropped weapon/device.		
9	Excavation [redacted] oriented ESE/WNW, spoil piled at ESE end. Probably dug to retrieve test-dropped weapon. Vehicle/piece of equipment located within excavation.		
10	Graded area 170 x 35 ft, possible excavation at center, oriented generally ENE/WSW, located 1,850 ft N of Marker D.		
11	Crater 10 ft diam, located 1,085 ft WSW of Marker D, possibly present on photography of [redacted]		
12	Excavation [redacted] located 840 ft SW of Marker D, oriented E/W with spoil pushed to W end.		
13	Graded area [redacted] oriented NW/SE, located 470 ft NNE of Marker D. Two vehicles/pieces of equipment in center of graded area.		
14	Graded area 130 x 25 ft, oriented NE/SW, located 805 ft ENE of Marker D.		
15	Excavation 85 x 20 ft, located 1,725 ft NNE of Marker D, oriented NW/SE with spoil piled at NW end.		
16	Small scarred area 60 x 20 ft, located 2,725 ft ENE of Marker D, possibly related to excavation activity at item 17.		
17	Excavation 150 x 20 ft, located 2,620 ft ENE of Marker D, probable result of retrieval operation. Oriented generally E/W with spoil on W edge, indicating that drop was probably intended for Marker D or H, even though Marker G is closest.	--	--

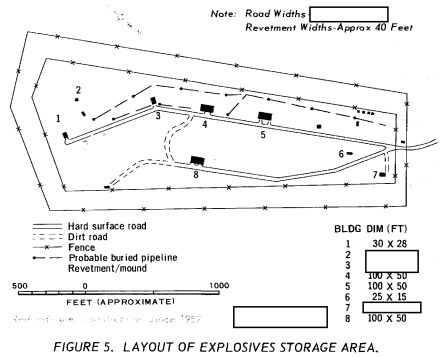

FIGURE 5. LAYOUT OF EXPLOSIVES STORAGE AREA.

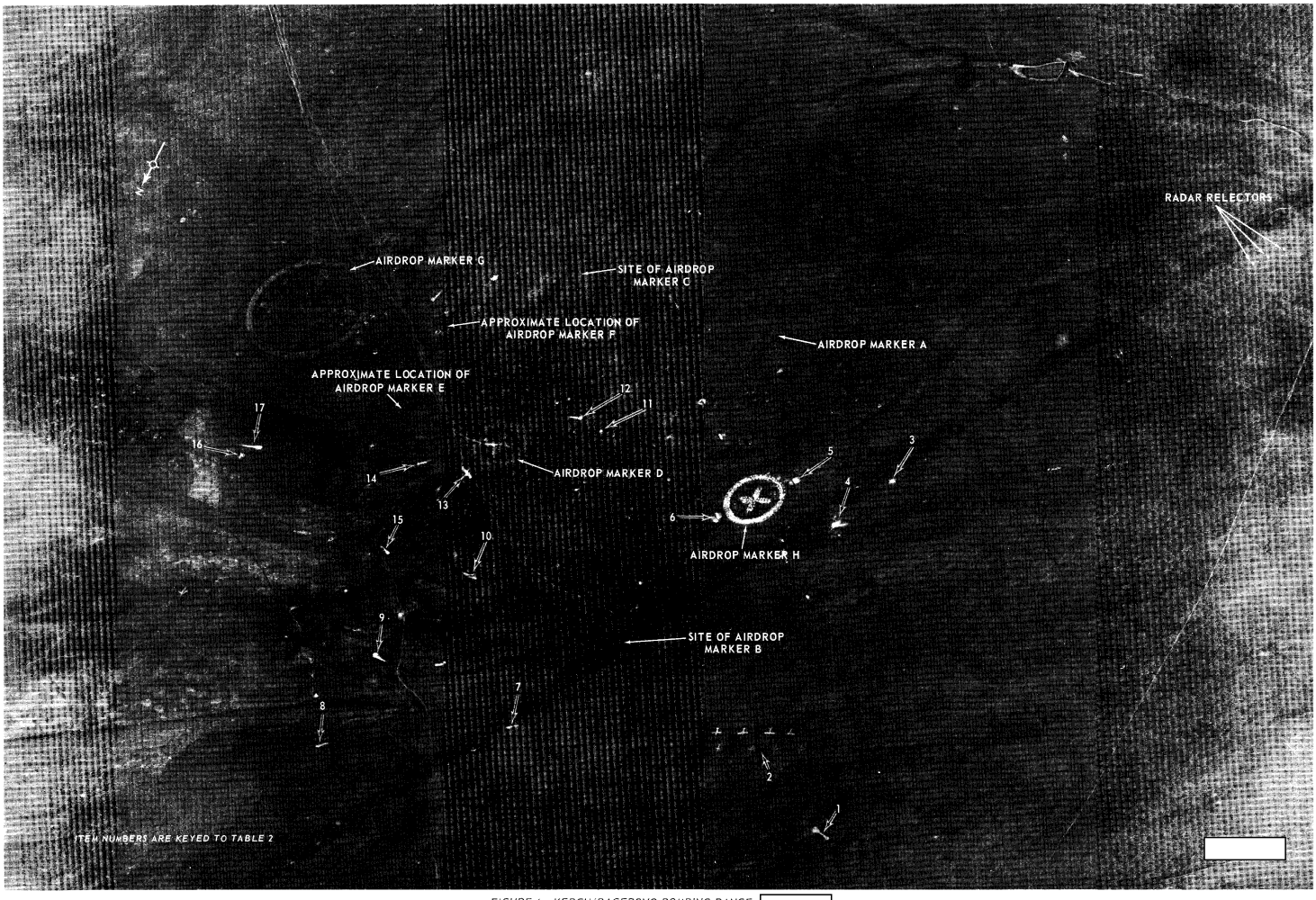

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FIGURE 6. KERCH/BAGEROVO BOMBING RANGE, [redacted]

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taxiways and intersect at a support area, forming a triangular configuration. An end-connecting and a cross-over link taxiway connect the west-northwest end of the old runway with the east-southeast/west-northwest taxiway. The north/south taxiway crosses the old runway just east of its midpoint. An old taxiway with 3 hardstands leads southeast and south from an approximate midpoint of the north/south taxiway bisecting the old runway and terminates at the intersection of the north/south and east-southeast/west-northwest taxiways. A third parking apron is connected to the north/south taxiway by 3 short taxiways. The parking apron (weapons loading area) nearest the runway along the north/south taxiway contains 3 loading pits (see inset, Figure 2). While the weapons loading area is performing a research and development function, it is almost a composite of the Types I and II loading areas at operational airfields. 3/

Support facilities south of the east-southeast/west-northwest taxiway consist of 2 maintenance areas containing 2 hangars and 50 support buildings; a rail-served POL storage area containing 6 semiburied tanks, 30 horizontal tanks, 1 bunker, and 7 support buildings; a motor pool with 4 buildings; and a housing area containing 30 buildings.

The airfield is equipped with ILS (Instrument Landing System) and GCA (Ground Controlled Approach).

EXPLOSIVES STORAGE AREA

The Explosives Storage Area, located just east of the airfield,

Figure 5. The area at Kerch/Bagerovo Airfield probably is used to store conventional high explosives

bombing range. In addition, the area may be used to store equipment of a classified nature used in the research and development phase.

The storage area is enclosed by a double security fence, with the only entrance controlled by a guardhouse. As seen on the photographic coverage, the area between the fences had been freshly plowed. The principal components of the storage area (Figures 2 and 5) are 3 revetted storage buildings, each 100 by 50 feet; and 2 smaller revetted storage buildings, The revetments around 3 sides of each of these 5 storage buildings are approximately 40 feet wide at ground level and taper to the top. Three storage/support buildings 25 by 15, and are located in the area. The only change noted since photography of is the addition of a revetment approximately 280 by 20 feet that parallels the north side of the road at the southeast end of the area. Four small structures are situated between the revetment and the road.

The quarry east of the airfield does have 2 underground entrances, but the absence of security would indicate they are used only for quarrying operations.

BOMBING RANGE

The Bombing Range, 4 nm northwest of the Kerch/Bagerovo Airfield, covers an area of approximately 21 square miles (7 nm east to west and 3 nm north to south). Elevation of the Bombing Range varies from sea level along the coast to 515 feet above sea level at the east end. The closest populated area, other than a small settlement at the west end of the range on the shore of Kazantipskiy Zaliv (Bay), is the city of Chistopolye, 4 nm to the south. Only tracks and dirt roads serve the various parts of the range.

The Bombing Range is peppered with hundreds of craters and ground scarring concentrated largely through the central area in the vicinity of the airdrop markers. Particularly large ground scarring and craters around the various markers have been shown on Figure 6 and described and dated, where possible, in Table 2. The ground scarring apparently is the recovery operation of the air-dropped test devices/weapons. When the range was covered by photography in 7 airdrop markers (A through G) and a group of aircraft silhouettes were observed (Figure 7). Four of the markers identified on the 1956 photographic coverage have since faded out and are not discernible on the larger scale photography obtained in Only one new marker (Marker H) has been added to the range since the 1956 coverage, and was identified on photography. Figure 8 shows plan views and dimensions of Markers A, D, G, and H and Table 3 gives a description of Markers A through H. At the time of coverage airdrop Marker H was the only marker with radar reflectors making its approach (Figure 9). The lead-in or run-in line to the marker is at a 40-degree azimuth (plus or minus 5 degrees) from the center of the marker, and the first group of 3 radar reflectors is located 23,975 feet from the marker. Three additional radar reflectors and one group of 3 reflectors mark the approach. An additional reflector is located in front of and to the rear of the marker, and 2 additional reflectors are on either side of the marker perpendicular to the run-in line.

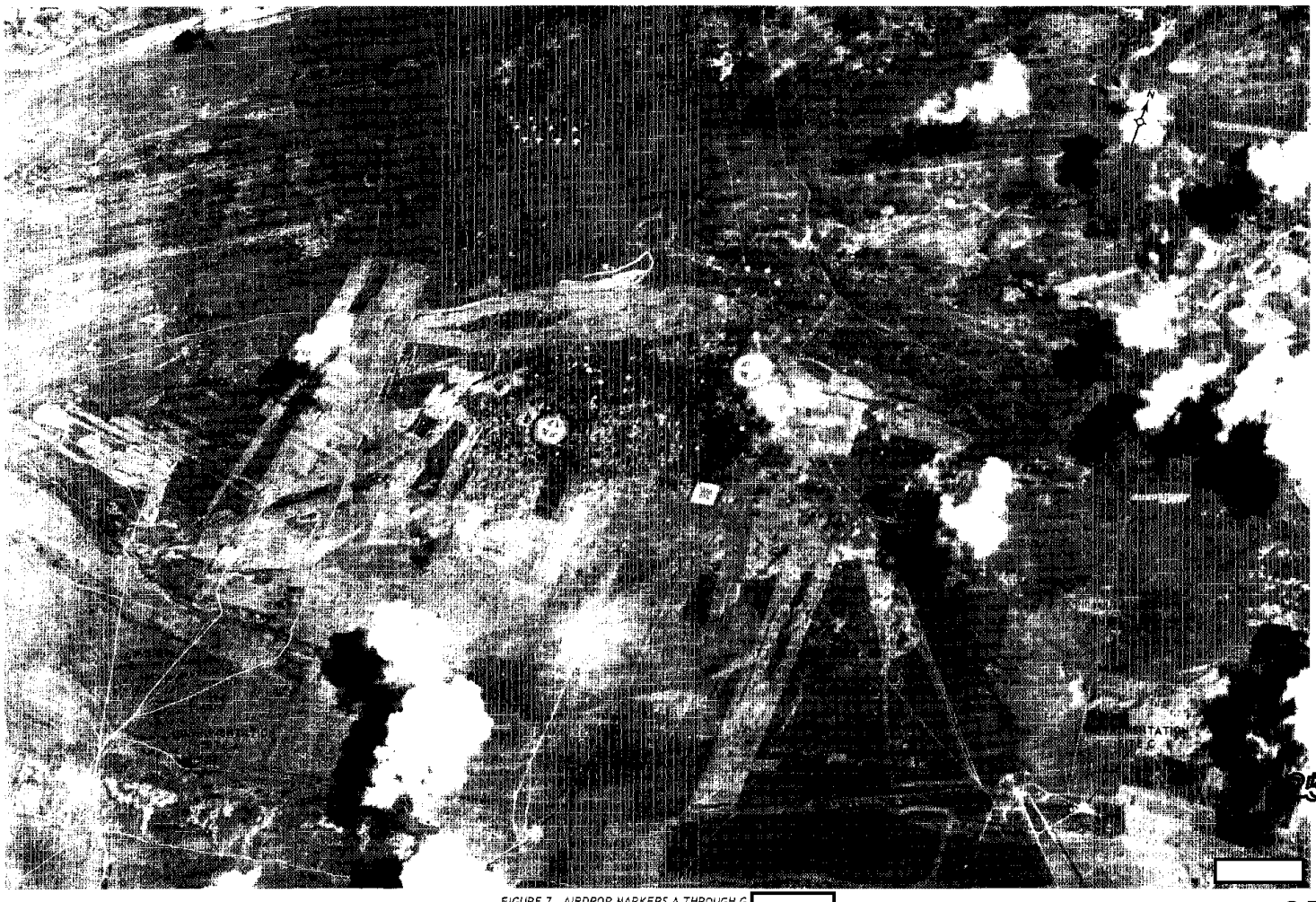
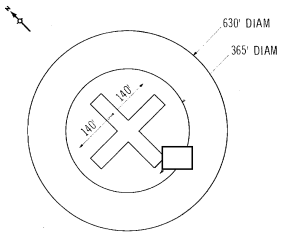
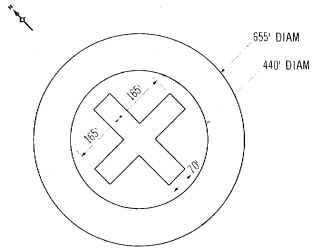


FIGURE 7. AIRDROP MARKERS A THROUGH G,

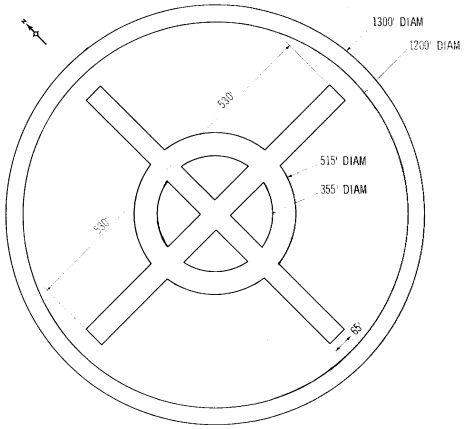
AIRDROP MARKER A



AIRDROP MARKER D



AIRDROP MARKER G



AIRDROP MARKER H

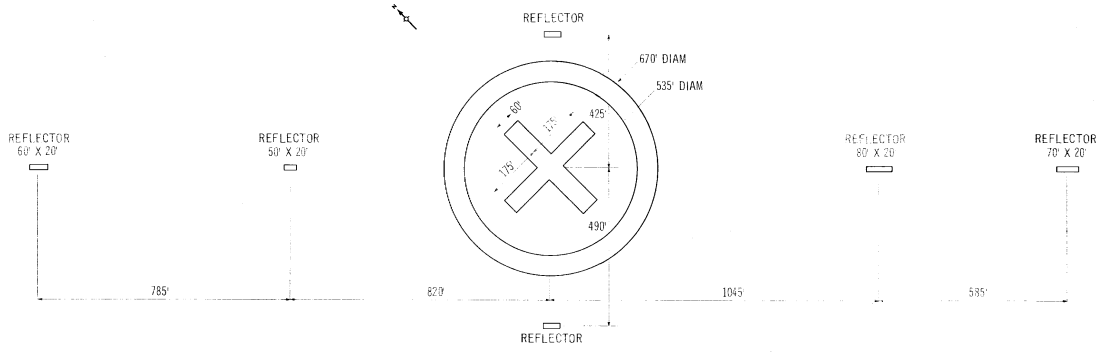


FIGURE 8. PLAN VIEWS AND DIMENSIONS OF AIRDROP MARKERS A, D, G, AND H.

Table 3. Airdrop Markers at Kerch/Bagerovo Airfield Bombing Range

Marker Designation	Description	First Identified	Negated
A	Outer circle with cross mark in center. Marker very distinct in 1956; later only faintly visible. Surrounded with over 200 craters between 10 and in diam. See Fig 10 for dimensions of marker.		
B	Circle 670 ft in diam with structure in center. Appeared to be in disuse in 1956; no longer discernible. Approximately 10-12 small craters in general vicinity of marker.		
C	Square 370 ft on a side. Faintly visible in but not discernible in Heavy concentration of craters located N and W of marker which appear to be associated with Markers A and D. Only scattering of craters located E and S of marker, indicating it has received only limited use.		
D	Outer circle with cross mark in center. In 1956 appeared freshly painted. Two rows of probable drums, 5 to a row, lined along N/S arm of cross mark. Road from instrumentation site C extends into center. Surrounded by approximately 150 craters in diam and 3 areas of scarring/grading. See Fig 10 for dimensions of marker.		
E	Plus shape, with each bar 120 x 30 ft. Seen in 1956; not seen on later photography.		
F	Small bombing circle in diam. Present in 1956; no longer visible.		
G	Two concentric circles with plus mark at center. Largest marker on range; identified in 1956. Approximately 10 craters 10-20 ft in diam are within marker; additional 60-70 craters 8-40 ft in diam surround it. See Fig 10 for dimensions of marker.		
H	Circle with plus mark at center. Radar reflectors mark approach and additional radar reflectors are perpendicular to approach, or run-in direction, on either side of marker. Five craters and 2 scarred areas are within marker, and approximately 35 craters in diam are near it. Some drops probably were intended for Markers A and D. See Fig 10 for dimensions of marker.		

The only other markers forming a similar triangular pattern with instrumentation sites A and C is Marker A, which has been present since 1956 and when last seen appeared to be in disuse. Approximately 200 craters, varying in diameter, surrounded the marker. Marker A was probably used for the same type of ballistics testing as that which has taken place at Marker H, prior to the construction of Marker H.

The other marker showing considerable use is Marker D, where approximately 150 craters varying between 25 feet in diameter are located. Although was used for the basic information in this report, an examination of later photography of revealed that Marker D had been retouched and radar reflectors added to mark its approach. The marker was partially renovated when seen on photographic coverage. The run-in line to Marker D is from east to west, with a radar reflector placed in front of and to either side of the marker. Five additional radar reflectors are located along the run-in line. Four new areas of ground scarring were also identified around the marker on the photography.

Four Bombing Range instrumentation sites are located along the southern side of the Bombing Range. Although the functions of the individual sites cannot be determined from available photography, the locations of these sites indicate they probably serve as camera positions, electronic facilities, and other facilities necessary to gain information on the ballistics of airdropped mock-up weapons/devices. Similar permanent facilities were not identified along the northern side of the range, but it is possible cameras and instrumentation trailers could be positioned along this side of the range at pre-established points just prior to an airdrop. Instrumentation sites A, B, and C have been present since the 1956 photographic coverage. Site D was cloud covered on the 1956 coverage and can first be identified on photography. A possible camera station is located just north of the village of Christopolye (Figure 1).

Instrumentation site A, the westernmost site, consists of one rectangular structure approximately (Figure 11). The site is served by a dirt road connecting it with sites B and C. No change has been noted in the site since 1956.

Instrumentation site B is located between sites A and C, and contains one circular structure approximately feet in diameter (Figure 12). When the site was identified in 1956 it appeared to contain 2 small unidentified structures and was connected to the Bombing Range by several tracks. Tracks are no longer visible leading into the range and the only road serving the site is an access road extending off the road connecting sites A and C.

Instrumentation site C probably serves as the central control facility for the range, and it contains the largest number of buildings of any of the sites. The site has not changed significantly since the 1956 photographic coverage (Figure 13). A parking apron for vehicles and equipment is located in the southern part of the site. When seen on photography 2 vehicles/pieces of equipment were parked on the apron, but on only one item was present. The road serving sites A and B leads from this site and in addition other natural surface improved roads connect the site with both the Bombing Range and Kerch/Bagerovo Airfield.

Instrumentation site D is located at the extreme southeastern end of the range approximately 22,000 feet from Marker H (Figure 14). The site contains 2 buildings, and 20 by 15 feet, and an unidentified structure that is probably the foundation of a razed building. An unimproved natural surface road leads from the airfield along the south side of the site and extends into the Bombing Range.

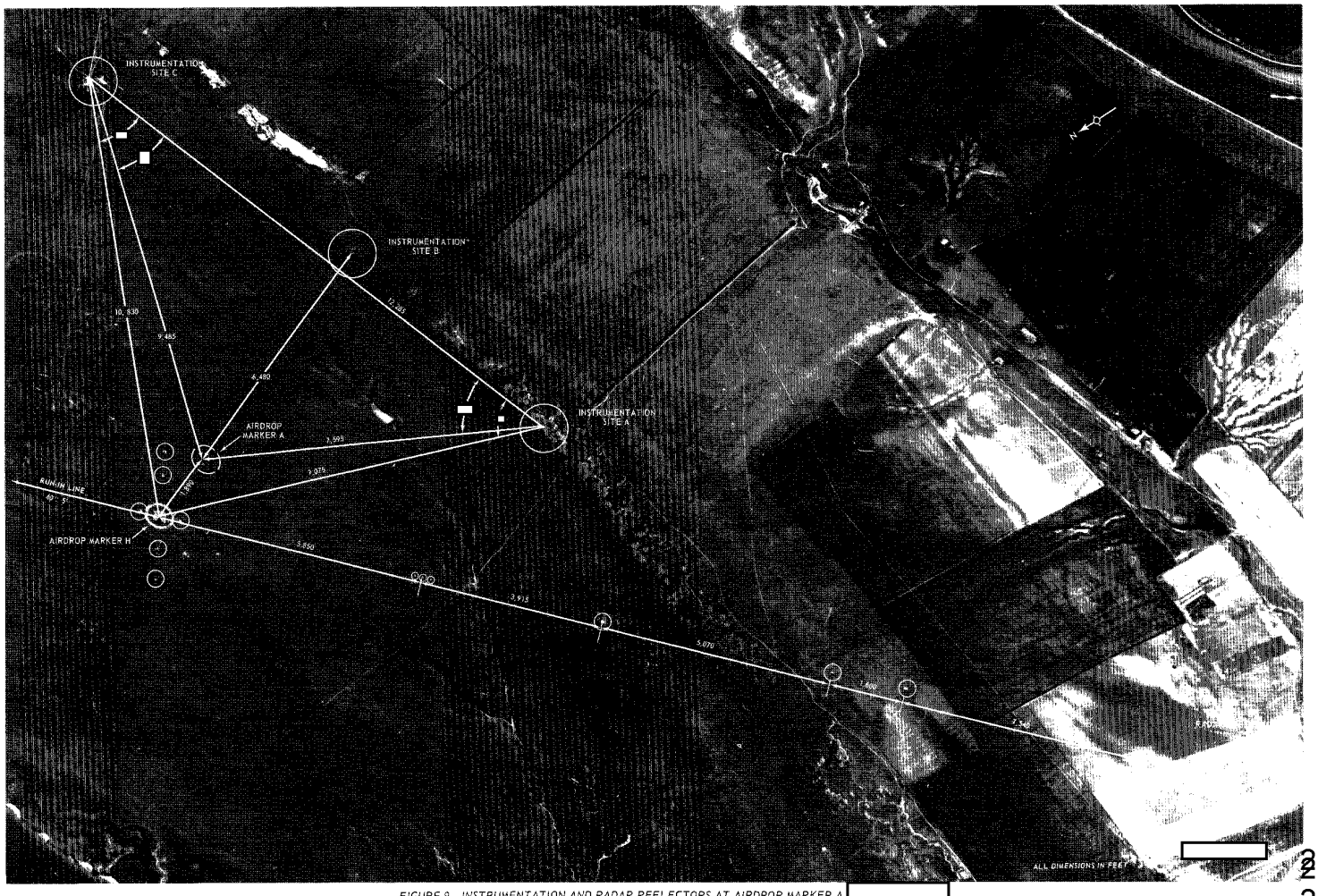


FIGURE 9. INSTRUMENTATION AND RADAR REFLECTORS AT AIRDROP MARKER A.

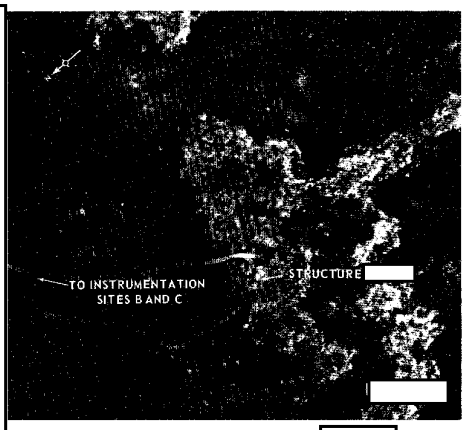


FIGURE 11. INSTRUMENTATION SITE A,

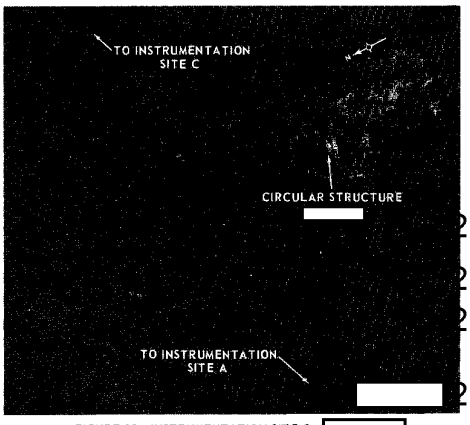


FIGURE 12. INSTRUMENTATION SITE B,

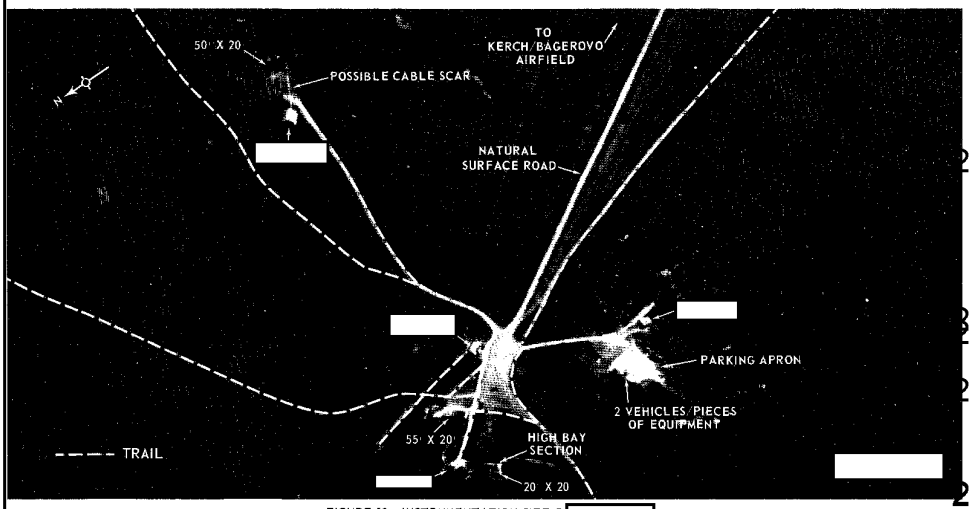


FIGURE 13. INSTRUMENTATION SITE C,

LONG-RANGE AIR FORCE PRACTICE BOMBING RANGES

Two Long-Range Air Force (LRAF) practice bombing ranges located near the Black Sea that have been reported

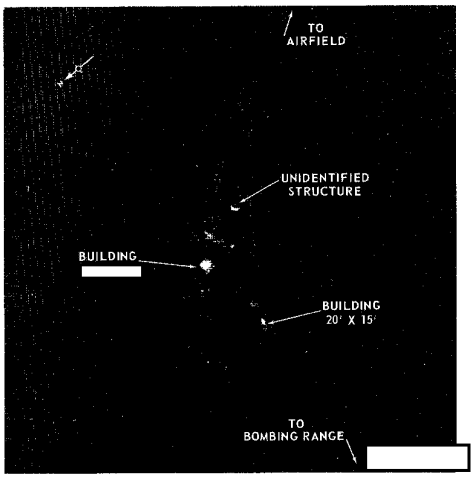


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FIGURE 14. INSTRUMENTATION SITE D,

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FIGURE 16. LONG-RANGE AIR FORCE BOMBING RANGE, DZHANKOY, USSR

25X1

as being active between 1963 and 1966 are Kherson and Dzhankoy. 5/ These bombing ranges were compared with the bombing range at Kerch/Bagerovo Airfield for any similarities.

Kherson LRAF Bombing Range is located in an area of sand dunes 20 nm southeast of the city of Kherson at 46-37N 033-05E. There is no evidence of airdrop markers in the dunes, but numerous craters are scattered throughout the area. It is possible markers are placed or painted in the area prior to its being used for bombing practice and that these markers have since been covered over by blowing sand. No instrumentation could be identified in the area.

The Dzhankoy LRAF Bombing Range is located on the Crimean Peninsula 14 nm east-northeast of the city of Dzhankoy at 45-47N 34-43E (Figure 16). Two airdrop markers are located at the bombing range and the entire area is peppered with numerous craters. Neither of the markers has radar reflectors marking their approach, nor is there evidence of ground scarring to indicate retrieving of airdropped devices such as those identified at Kerch/Bagerovo. No instrumentation can be identified along the side of the range as has been identified at Kerch/Bagerovo. At the southwest corner of the bombing range are located a support area and the Stalnoye Airfield with a landing strip running west-northwest/east-southeast and measuring 3,270 by 470 feet. The support area is probably in support of both the airfield and the bombing range, and contains 20 to 25 buildings.

REFRENCES

REFERENCES (Continued)

[redacted] 25X1

MAPS OR CHARTS

USAF. US Air Target Chart, Series 200, Sheet M0249-16

DOCUMENTS

1. Air Force Hdqrs. Detailed Photo Intelligence Report No T58-36, *Kerch/Bagerovo Airfield, USSR*, Dec 58 (TOP SECRET [redacted] 25X1
2. NPIC. R-127/63, *Comparative Analysis Kerch/Bagerovo Airfield, USSR, July 1956-August 1962*, Jul 63 (TOP SECRET [redacted] 25X1
[redacted] 25X1
4. USAF. Manual 50-16, *Weapons Ranges*, Nov 63 (UNCLASSIFIED)
5. Air Force Special Communications Center [redacted] *Soviet Long Range Aviation Bombing Activity, 1960-1966*, 26 May 67 (TOP SECRET [redacted]) 25X1 25X1

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